

**METHODS FOR USING RESONANCE ENERGY TRANSFER-BASED  
ASSAY OF HIV-1 ENVELOPE GLYCOPROTEIN-MEDIATED  
MEMBRANE FUSION, AND KITS FOR PRACTICING SAME**

**Abstract of the Disclosure**

This invention provides: agents determined to be capable of specifically inhibiting the fusion of a macrophage-tropic primary isolate of HIV-1 to a CD4<sup>+</sup> cell, but not a T cell-tropic isolate of HIV-1 to a CD4<sup>+</sup> cell; and agents determined to be capable of specifically inhibiting the fusion of a T cell-tropic isolate of HIV-1 to a CD4<sup>+</sup> cell, but not a macrophage-tropic primary isolate of HIV-1 to a CD4<sup>+</sup> cell. This invention also provides: agents capable of specifically inhibiting the fusion of a macrophage-tropic primary isolate of HIV-1 with a CD<sup>+</sup> cell susceptible to infection by a macrophage-tropic primary isolate of HIV-1; and agents capable of specifically inhibiting the fusion of a T cell-tropic isolate of HIV-1 with a CD4<sup>+</sup> cell susceptible to infection by a T cell-tropic isolate of HIV-1. The agents include but are not limited to antibodies. This invention further provides: methods of inhibiting fusion of a macrophage-tropic primary isolate of HIV-1 with a CD<sup>+</sup> cell susceptible to infection by a macrophage-tropic primary isolate of HIV-1 which comprises contacting the CD4<sup>+</sup> cell with an amount of an agent capable of specifically inhibiting such fusion so as to thereby inhibit such fusion; and methods of inhibiting fusion of a T cell-tropic isolate of HIV-1 with a CD4<sup>+</sup> cell susceptible to infection by a T cell-tropic isolate of HIV-1 which comprises contacting the CD4<sup>+</sup> cell with an amount of an agent capable of specifically inhibiting such fusion so as to thereby inhibit such fusion.

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